

The opinion in support of the decision being entered today
was not written for publication and is not binding precedent of the Board.

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U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS W. SMITH AND KATHLEEN M. McGRANE

Appeal No. 2006-0049
Application No. 10/036,590

ON BRIEF

Before TORCZON, SPIEGEL and TIERNEY, Administrative Patent Judges.

TIERNEY, Administrative Patent Judge.

Decision on Rehearing

Smith requests rehearing of the Board's January 31, 2006 decision affirming the examiner's 35 U.S.C. 103 rejections of all of Smith's pending claims. (Smith Petition for Reconsideration, Received by BPAI March 24, 2006). Specifically, Smith requests that the decision be reconsidered and that all grounds of rejection be withdrawn. We have reconsidered the January 31, 2006 decision in light of Smith's request for rehearing but do not grant Smith's request to withdraw the rejections.

Appeal No. 2006-0049
Application No. 10,036,590

Summary of Smith's Request

Smith's claims are generally directed to an ink composition comprising water and a complex of an anionic dye, an anionic lightfastness-imparting agent and a polyquaternary amine compound and its use in an inkjet printing process. (Decision, p. 1).

The Board upheld the examiner's rejections of Smith's pending claims over Gundlach et al., U.S. Patent No. 6,054,505 ("Gundlach '505") in view of 1) Vieira, U.S. Patent No. 5,686,633 ("Vieira '633"); 2) Yokoyama, U.S. Patent No. 4,256,493 ("Yokoyama '493"); or 3) either Bergthaller, U.S. Patent 5,855,657 ("Bergthaller '657") or Ma, U.S. Patent No. 6,432,523 ("Ma '523"). In general terms, the Board upheld the rejections as Gundlach '505 teaches an ink composition and Vieira '633, Yokoyama '493, Bergthaller '657 and Ma '523 all teach improving ink lightfastness by adding the lightfastness agents identified in Smith's pending claims.

Smith disagrees with the Board's position. (Smith Petition for Rehearing, p. 3). Smith provides the following statement setting forth its disagreement with the Board's decision:

Appellants disagree with this position [of the Board]. One of ordinary skill in the art would not be motivated to add an additional lightfastness agent to the ink of Gundlach because Gundlach teaches that the ink therein already has improved lightfastness. The quoted portion (from column 6) of Gundlach stating that a need remains in the art for ink compositions with improved lightfastness also states that an objective of Gundlach is to provide ink compositions with improved lightfastness. While Gundlach states the need from improved lightfastness, Gundlach also purports to solve the problem with improved lightfastness. Accordingly, one of ordinary skill in the art would have no reason to add an additional lightfastness agent to the ink of Gundlach et al. based on the teachings of the references viewed in combination at the time the present invention was made.

(Smith Petition for Rehearing, p. 3, emphasis in original).

Appeal No. 2006-0049
Application No. 10,036,590

Smith's request for rehearing rests on two propositions: 1) Gundlach '505 already contains a lightfastness agent and therefore there is no need for an additional lightfastness agent to be added to Gundlach; and/or 2) Gundlach '505 has already improved the lightfastness of its ink such that no further improvement is needed. These two propositions are discussed below.

1) Gundlach Does Not Identify the Presence of a Specific Lightfastness Agent

Smith alleges that there is no reason to add an "additional" lightfastness agent to Gundlach. Smith however, fails to identify where Gundlach teaches that its ink composition employs a specific lightfastness agent.

Gundlach '505 states that an object of its invention is to provide ink compositions with improved lightfastness. (Gundlach '505, col. 6, lines 40-41). Gundlach states that this objective, as well as others, can be achieved as follows:

These and other objects of the present invention (or specific embodiments thereof) can be achieved by providing an ink composition which comprises (1) water; (2) a nonpolymeric salt comprising at least one cation and at least one anion; and (3) a colorant comprising an anionic dye complexed with a polyquaternary amine compound. Another embodiment of the present invention is directed to an ink composition which comprises (1) water; (2) a nonpolymeric salt comprising at least one cation and at least one anion; (3) an anionic dye; and (4) a polyquaternary amine compound. In one specific embodiment, the polyquaternary amine compound is selected from the group consisting of polydiallyl ammonium compounds, polyquaternized polyvinylamines, polyquaternized polyallylamines, epichlorohydrin/amine copolymers, cationic amido amine copolymers, copolymers of vinyl pyrrolidinone and a vinyl imidazolium salt, and mixtures thereof.

Appeal No. 2006-0049
Application No. 10,036,590

(Gundlach '505, col. 6, lines 42-58). Thus, while Gundlach '505 states that an objective is improving the lightfastness of inks, Gundlach does not identify a specific lightfastness additive for its inks.

An electronic search of the Gundlach '505 patent failed to reveal the presence of a specific lightfastness additive. For example, Gundlach '505 states that:

When the selected anionic dye is Acid Blue 9, the dye/polyquaternary complex can, in some instances, exhibit reduced lightfastness, exhibiting a red-yellow chromophore shift when exposed to visible light irradiation, particularly yellow light. In this instance, the incorporation of a copper phthalo cyan dye, such as Direct Blue 199 or Direct Blue 86, can improve fade resistance of the ink. The inks containing the polyquaternary compound, Acid Blue 9, and a copper phthalo dye exhibit a high degree of both waterfastness and lightfastness.

(Gundlach '505, col. 15, lines 21-31). Accordingly, Gundlach '505 teaches that specific combinations of dyes can provide improved lightfastness.

Smith has failed to demonstrate that we overlooked or misapprehended a teaching of a lightfastness agent in Gundlach '505. Accordingly, based upon the record presented, we conclude that Smith has failed to demonstrate that Gundlach teaches the presence of a specific lightfastness agent such that one of ordinary skill in the art would "have no reason to add an additional lightfastness agent." (Smith Petition for Rehearing, p. 3, emphasis in original).

2) Gundlach is Not Limited To High Lightfastness Ink Compositions

Smith argues that Gundlach teaches that an objective of its invention is to provide improved lightfastness and that "Gundlach also purports to solve the problem with improved

Appeal No. 2006-0049
Application No. 10,036,590

lightfastness.” (Smith Petition for Rehearing, p. 3). Smith does not specifically identify where Gundlach ‘505 states that it solved the problem with lightfastness.

An electronic search of the Gundlach ‘505 patent failed to reveal a statement by Gundlach indicating that it had solved the problem of lightfastness when using the various components that make up its claimed ink compositions. Gundlach ‘505 does state that when Acid Blue 9 is selected, the lightfastness of the ink is reduced but this reduction can be overcome by the addition of a copper phthalo cyan dye. (Gundlach ‘505, col. 15, lines 21-28). Yet, Gundlach ‘505 is not limited to such combinations of dyes. Specifically, claim 1 of Gundlach ‘505 requires four (4) specific components with one of the components identified only as “an anionic dye.” Thus, Gundlach ‘505 is not limited to only those compositions that possess high lightfastness, e.g., inks having Acid Blue 9 dye combined with a copper phthalo cyan dye to improve the inks lightfastness. Based upon the record presented, Smith has failed to demonstrate that the Board misapprehended or overlooked a teaching in Gundlach that no further improvement in lightfastness was possible or that one of ordinary skill in the art would have understood that Smith had sufficiently solved the lightfastness problem for its anionic dye ink composition.

The Board reaffirms its January 31, 2006 opinion. Specifically, Gundlach ‘505 teaches an anionic dye ink. Gundlach teaches that an object of its invention is improved lightfastness. (Gundlach ‘505, col. 6, lines 40-41). As set forth in the original opinion mailed January 31, 2006, Vieira ‘633, Yokoyama ‘493, Bergthaller ‘657 and Ma ‘523 all teach improving ink lightfastness of anionic dye inks by adding a lightfastness agent. We hold that a person of ordinary skill in the art desiring the benefits of Gundlach ‘505’s anionic dye ink jet composition,

Appeal No. 2006-0049
Application No. 10,036,590

bright colors, low cost, etc. would have been motivated to include the anionic lightfastness agents of Vieira '633, Yokoyama '493, Bergthaller '657 and Ma '523 as the presence of a lightfastness agent is described by Vieira, Yokoyama, Bergthaller and Ma as providing improved lightfastness for anionic dye jet printing inks.

Smith's request for reconsideration has been considered and is denied.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

<u>/ss/ Richard Torczon</u>)	
RICHARD TORCZON)	
Administrative Patent Judge)	
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<u>/ss/ Carol A. Spiegel</u>)	BOARD OF PATENT
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<u>/ss/ Michael P. Tierney</u>)	
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Appeal No. 2006-0049
Application No. 10,036,590

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